

REMARKS

Claims 1-4, 6-12, 14 and 15 remain in the application. Claims 5 and 13 have been cancelled and new claim 16 has been added to the application.

First, the abstract of the disclosure is objected to because it exceed the 150 word maximum. Applicant submits herewith an amended replacement abstract on a separate sheet as attachment 1.

Second, claims 1-15 stand rejected under 35 USC 102(e) as being anticipated by Hu et al. (US 6,745,995). The Examiner contends that Hu discloses a plunger 38 and vane 34 which gradually rotates and closes into the opening of the arcuate neck 1C to gradually and uniformly open or close the arcuate neck 1C and linearly control the flow of coolant flow therethrough. Applicant respectfully disagrees and traverses this rejection.

Applicant has amended independent claim 1 to set forth a valve for controlling fluid flow between an engine and a radiator in an automotive vehicle comprising: a housing (12) disposed between the engine and radiator, the housing having a chamber (26) formed therein; a radiator port (32) extending between the radiator and the chamber for passing coolant flowing between the radiator and the chamber; a bypass port (30) extending between an outlet from the engine and the chamber for passing coolant flowing between the engine and the chamber; an engine port (28) extending between an inlet from the engine and the chamber for passing coolant flowing from one or both of the radiator and bypass ports between the inlet of the engine and the chamber; a vane (36) disposed within and pivotally coupled to the chamber for adjusting a flow of fluid within the chamber; and a drive assembly (50)

operatively coupled to the vane for varying the position of the vane within the chamber wherein fluid flow between the radiator and engine is proportionally controlled based upon a predetermined operating temperature range, wherein the vane (36) has a vane wall (40) extending radially and a tapered plunger (46) extending arcuately from the vane wall, and the radiator flow port (32) includes an arcuate tapered neck (34), the plunger (46) moving in and out of the neck (34) decreasing and increasing, respectively, fluid flow between the radiator flow port and the chamber.

That is, claim 1 has been amended to specifically set forth the arcuate tapered plunger (46) and the arcuate tapered neck (34). The relationship between the tapered plunger and the tapered neck provides a more linear relationship between the degree of opening of the valve and fluid flow therethrough; e.g. 10 percent opening provides 10 percent flow.

First, the Hu et al. reference clearly does not disclose a tapered plunger extending arcuately from the vane wall. The plunger 38 of Hu extends perpendicularly and linearly from the vane 34 as is clearly shown in Figures 19-25. Additionally, the Hu reference also clearly does not disclose an arcuate tapered neck. The neck 1C of Hu is straight or linear and contiguous with the straight or linear port 16 as clearly shown in Figures 12-15 and 21.

Second, claims 7 and 8 of the present invention set forth the plunger (46) tapers in a direction from the vane (36) towards the distal end of the plunger and the taper of the plunger (46) corresponds to the taper of the neck (34) for providing a uniform gap between the plunger (46) and the neck (34). Hu clearly does not disclose this corresponding, mating or

mirror taper between the plunger and the neck. In fact, the taper of the plunger 38 of Hu is exactly opposite in direction of the taper of the port 16 and neck 1C.

Additionally, claim 1 stands rejected under 35 USC 102(b) as being anticipated by Kurr et al. (US 5,529,026). Applicant respectfully disagrees and traverses this rejection. Amended claim 1 includes the vane having a radially extending vane wall and a tapered plunger (46) extending arcuately from the vane wall. Kurr et al. clearly does not disclose a tapered plunger extending arcuately from the vane wall as acknowledge by the Examiner on page 4 of the present Office Action.

Finally, claim 9 stands rejected under 35 USC 103(a) as being unpatentable over Kurr et al. in view of Roku (US 3,115,159). Applicant further respectfully disagrees and traverses this rejection.

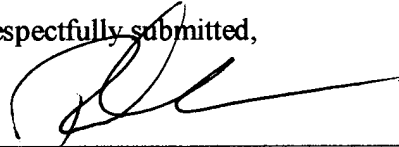
Applicant has also amended independent claim 9 to include both an arcuate tapered plunger extending from the vane wall for moving in and out of a corresponding arcuate tapered neck of the radiator port. Clearly neither Kurr nor Roku disclose either separately or in combination either a tapered plunger or a tapered neck. Therefore, claim 9 is clearly distinguishes the invention over the cited art and the rejection must be withdrawn.

Therefore, amended claim 1 and the remaining claims 2-4, 6-12 and 14-16 clearly distinguish Applicant's invention over the cited prior art.

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It is respectfully submitted that this patent application is in condition for allowance, which allowance is respectfully solicited. If the Examiner has any questions regarding this amendment or patent application, the Examiner is invited to contact the undersigned.

Respectfully submitted,



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